

Patent Application No. 09/654,550  
Attorney Docket No. 81754.0040

### REMARKS

Minor changes are made to the Title of the invention. Applicant appreciates the Examiner's indication that claims 11 and 15 are allowed. To expedite the prosecution of this application, claims 2, 3 and 16 are canceled without prejudice. Claims 12 and 14 are amended to clarify the language of those claims. Claim 14 is not amended in response to the rejection under 35 U.S.C. § 112, first and second paragraphs. Claims 5 and 11-15 are pending in the application. Reexamination and reconsideration of the application, as amended, are respectfully requested.

#### Claim Objections

Claims 3, 5 and 14 were objected to for informalities. Applicant submits that the above amendments render those grounds of rejection moot.

#### Rejections Under 35 U.S.C. § 112, 1<sup>st</sup> and 2<sup>nd</sup> Paragraphs

Claim 14 was rejected under 35 U.S.C. § 112, 1<sup>st</sup> paragraph and second paragraph. The Examiner takes the position that "The specification fails to describe an embodiment in which a light-emitting surface transfers 'the optical signal from an arithmetic processing apparatus as an optical signal.'" The Examiner also states that the term optical signal transfer device in claim 14 is used to mean "light-emitting device."

Applicant respectfully disagrees and submits that the present application does disclose that "the optical transfer device is a light-emitting surface that is formed in a mounting substrate," as required by claim 14. For example, as shown in Fig. 6 and as described at page 11, line 22 through page 13, line 23, a light-emitting surface 72 is formed on or within the system substrate 71 which may be formed from light-emitting elements and may be used as the light-emitting surface

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72. The term "optical" may be defined as "Pertaining to or utilizing visible or near-visible light."<sup>1</sup> Thus, an optical signal is a type of light signal.

Accordingly, the rejection of claim 14 under 35 U.S.C. § 112, 1<sup>st</sup> paragraph or 2<sup>nd</sup> paragraph was improper and claim 14 is in condition for allowance.

### Art-Based Rejections

#### Claims 2, 3 and 16

Claim 2 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kitamura [U.S. Patent 5,250,816]. Claim 3 was rejected under 35 U.S.C. § 102(b) as being anticipated by Kitamura [U.S. Patent 5,250,816]. Claim 16 was rejected under 35 U.S.C. § 102(b) as being anticipated by either Kitamura [U.S. Patent 5,250,816] or Frazier [U.S. Patent 5,199,087].

As noted above, claims 2, 3 and 16 have been cancelled without prejudice, thereby rendering the rejection of those claims moot.

#### Claim 12

Claim 12 was rejected under 35 U.S.C. 102(b) as being anticipated by Reid, deceased et al. (U.S. Patent 5,159,700).

Claim 12 has been amended to clarify the meaning of the term "embedded." Applicant submits that the Reid reference fails to teach or suggest "at least one optical signal transfer device completely embedded in the mounting substrate such that the at least one optical signal transfer device is completely surrounded by the mounting substrate," as required by claim 12. For example, as shown in Fig. 6b of Reid, the optical channel 63 is not embedded in the silicon substrate 61, but is instead formed in an etched out channel in the silicon substrate 61. For at least these reasons, claim 12 is not anticipated by the Kitamura reference. Accordingly, Applicant respectfully requests that the rejection of this claim 12 be withdrawn.

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<sup>1</sup> McGraw-Hill DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS, 5<sup>th</sup> Edition.

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**Claims 5 and 13**

Claims 5 and 13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Bausman et al. [U.S. Patent 5,442,475].

At page 7 of the Office Action, the Examiner takes the position that Bausman et al. "do not specifically disclose the direct contact of the optical signal transfer device to the light-receiving element. However, it is well-known in the art to directly connect optical signal transfer devices to detectors." The Examiner also states that the choice of a direct connection is a matter of design choice and requires only routine skill in the art.

Applicant respectfully submits that the Official Action has provided no support for this position. Applicant respectfully traverses this rejection and submits that the cited references fail to teach or suggest the missing recitations of claims 5 and 13. Accordingly, Applicant respectfully requests that the Examiner cite a reference that teaches or suggests these missing recitations in the context of claim 5 and 13. In the event the Examiner is unable to cite such a reference, then the rejections should be withdrawn.

Applicant believes the foregoing amendments place the application in condition for allowance and early, favorable action is respectfully solicited.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles telephone number (213) 337-6793 to discuss the steps necessary for placing the application in condition for allowance.

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If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,

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